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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/603,374	06/25/2003	Bryan K. Casper	80107.016US1	2813

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EXAMINER
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TSAI, CAROL S W

ART UNIT	PAPER NUMBER
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2857

DATE MAILED: 11/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/603,374	<b>Applicant(s)</b> CASPER ET AL.	
	<b>Examiner</b> Carol S Tsai	<b>Art Unit</b> 2857	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on 25 June 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) 1-7 and 21-30 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 8-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-30 are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Election/Restrictions*

1. This application contains claims directed to the following patentably distinct species of the claimed invention:

- I. The species best illustrated by Fig. 1 (claims 1-7).
- II. The species best illustrated by Fig. 8 (claims 8-20).
- III. The species best illustrated by Fig. 3 (claims 21-30).

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, no claim is deemed generic.

Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to

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be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

2. During a telephone conversation with William W. Hollway on October 27, 2004 a provisional election was made without traverse to prosecute the invention of Group II, claims 8-20. Affirmation of this election must be made by applicant in replying to this Office action. Claims 1-7 and 21-30 withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

3. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

### ***Claim Rejections - 35 USC § 102***

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an

international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

4. Claims 8-14 are rejected under 35 U.S.C. 102(e) as being anticipated by U. S. Patent No. 6,621,323 to Casper et al.

The applied reference has a common assignee/inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Casper et al. disclose an integrated circuit (integrated circuits 152 shown on Fig. 1) comprising: a signal node (I/O nodes 162 and 164 shown on Fig. 1) to receive a signal, and a port circuit (SBD port circuit 160 shown on Fig. 2) coupled to the signal node, the port circuit configured to receive digital data from the signal node during a first mode of operation, and configured to capture a waveform of the signal on the signal node during a second mode of operation (see col. 5, lines 20-36 and col. 5, line 47 to col. 6, line 11).

As to claim 9, Ochiai also discloses a variable offset comparator (variable offset comparator (VOC) 214 shown on Fig. 2) having an input node coupled to the signal node (see col. 2, lines 12-14).

As to claim 10, Ochiai also discloses an output driver (output driver 212 shown on Fig. 2) having an output coupled to the signal node (see col. 3, lines 14-15).

As to claim 11, Ochiai also discloses the port circuit being configured as a simultaneous bidirectional port circuit

As to claim 12, Ochiai does not expressly disclose a clock input node to receive a clock signal.

It is, however, considered inherent that Ochiai disclose a clock input node to receive a clock signal (see col. 3, line 48 to col. 4, line 30), because such element is known to be necessary in order that clock signals can be generated.

As to claim 13, Ochiai also discloses a sampling circuit coupled to the clock input node to sample the signal on the signal node at various time points (see col. 3, lines 26-27 and lines 48-49).

As to claim 14, Ochiai also discloses a storage mechanism to store information describing the waveform of the signal (see col. 8, lines 15-39).

### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 15-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over U. S. Patent No. 6,621,323 to Casper et al. in view of U. S. Patent No. 5,276,678 to Hendrickson et al.

The applied reference has a common assign/inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome by: (1) a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an invention "by another"; (2) a showing of a date of invention for the claimed subject matter of the application which corresponds to subject matter disclosed but not claimed in the reference, prior to the effective U.S. filing date of the reference under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and that the inventor named in the application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer in accordance with 37 CFR 1.321(c). For applications filed on or after November 29, 1999, this rejection might also be overcome by showing that the subject matter of the reference and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person. See MPEP § 706.02(l)(1) and § 706.02(l)(2).

As noted above, Ochiai discloses the claimed invention, except for the storage mechanism comprising a counter.

Hendrickson et al. teach the storage mechanism comprising a counter (see col. 20, lines 3-31).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Ochiai's method to include the storage mechanism comprising a

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counter, as taught by Hendrickson et al., in order to provide a unique 10-bit output for each time slot.

As to claim 16, Ochiai does not disclose the storage mechanism comprising a shift register.

Hendrickson et al. teach the storage mechanism comprising a shift register (see col. 14, lines 28-41).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Ochiai's method to include the storage mechanism comprising a shift register, as taught by Hendrickson et al., in order to couple data from the microprocessor to the transmit bus control to accomplish such communication (see Hendrickson et al. col. 14, lines 32-34).

As to claim 17, Casper et al. disclose an electronic system comprising: an integrated circuit (integrated circuits 152 shown on Fig. 1) including a signal node (I/O nodes 162 and 164 shown on Fig. 1) to receive a signal, and a port circuit (SBD port circuit 160 shown on Fig. 2) coupled to the signal node interface, the port circuit configured to receive digital data from the signal node during a first mode of operation, and configured to capture a waveform of the signal on the signal node during a second mode of operation (see col. 5, lines 20-36 and col. 5, line 47 to col. 6, line 11).

Ochiai does not disclose a network capable of coupling the integrated circuit to a network.

Hendrickson et al. teach a network capable of coupling the integrated circuit to a network (see col. 23, lines 56-65).



It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Ochiai's method to include a network capable of coupling the integrated circuit to a network, as taught by Hendrickson et al., in order that data can be transferred via the network.

As to claim 18, Ochiai also discloses a variable offset comparator (variable offset comparator (VOC) 214 shown on Fig. 2) having an input node coupled to the signal node (see col. 2, lines 12-14).

As to claim 19, Ochiai also discloses an output driver (output driver 212 shown on Fig. 2) having an output coupled to the signal node (see col. 3, lines 14-15).

As to claim 20, Ochiai also discloses a sampling circuit coupled to the clock input node to sample the signal on the signal node at various time points (see col. 3, lines 26-27 and lines 48-49).

### ***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Jaussi et al. disclose a circuit being adapted to convert a first voltage signal from a bidirectional signal line to a first current signal, the first voltage signal to represent first data transmitted from a first transmitter and second data transmitted from a second transmitter.

Hauke et al. disclose a bidirectional serial port for digital audio data including cable connector for coupling the port to a cable, a cable driver having a serial digital audio signal as an input and also having an output, a receiver having an input and an output, and an impedance and

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level matching network coupled to the output of the cable driver, the input of the receiver, and the cable connector.

Hong discloses a multi-design integrated circuit having I/O buffers that are shared by multiple designs in the integrated circuit, the multi-design integrated circuit being designed by combining netlists and pin-pad assignment lists for the individual designs into one overall netlist or multi-design netlist.

Steffes et al. disclose a wireless data communication system for establishing a data link between a portable communication device and an interface circuit, such as an interface circuit to a LAN, includes a plurality of transceivers in communication with a control circuit.

Walker discloses a simultaneous bi-directional input/output (I/O) circuit.

### ***Contact Information***

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Carol S. W. Tsai whose telephone number is (571) 272-2224. The examiner can normally be reached on Monday-Friday from 8:30 AM to 5:00 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marc S. Hoff can be reached on (571) 272-2216. The fax number for TC 2800 is (703) 872-9306. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the TC 2800 receptionist whose telephone number is (571) 272-1585 or (571) 272-2800.

In order to reduce pendency and avoid potential delays, Group 2800 is encouraging

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FAXing of responses to Office actions directly into the Group at (703) 872-9306. This practice may be used for filing papers not requiring a fee. It may also be used for filing papers which require a fee by applicants who authorize charges to a PTO deposit account. Please identify the examiner and art unit at the top of your cover sheet. Papers submitted via FAX into Group 2800 will be promptly forwarded to the examiner.

A handwritten signature in cursive script, appearing to read "Carol S. W. Tsai".

Carol S. W. Tsai  
Patent Examiner  
Art Unit 2857

03/01/04